ALEXANDRIA, VA 22313-1450
IF UNDELIVERABLE RETURN IN TEN DAYS

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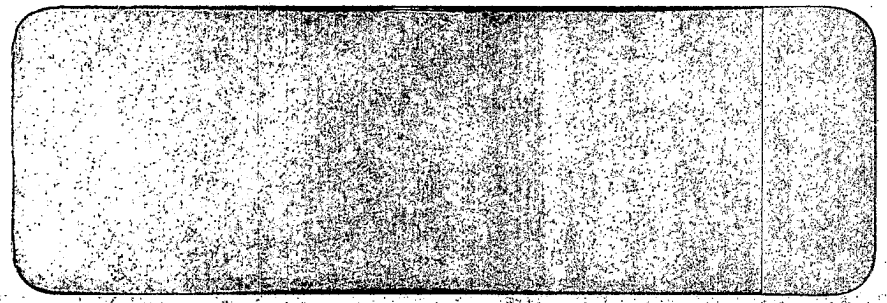

PK2

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,401	06/19/2000	STEFAN SCHMITZ	10191/1365	2060

26646 7590 06/10/2004

KENYON & KENYON
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER	
MEHRPOUR, NAGHMEH	

ART UNIT	PAPER NUMBER
2686	21

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/509,401	STEFAN SCHIMITZ	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-12, 14-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, 14-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 10-12, 14-22,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pogue, Jr. et al. (US Patent Number 5,144,667) in view of Pang et al. (US Patent Number 6,445,283 B1).

Regarding **Claim 10,** Pogue teaches a method for assigning a remote control operation to a base station, comprising the steps of:

determining a randomized activation for an assignment (see figure 3, col 4 lines 40-52), in figure 3, base station determines and transmits random seed A;

causing the base station to transmit a search signal after the determining step (col 3 lines 10-17);

returning a contact signal from the remote control operation in response to an agreement of the search signal with a stored reference signal (col 3 lines 19-21, col 5 lines 11-13); and

causing the base station to subsequently transmit the activation signal in response to the assignment (col 3 lines 18-20, col 5 lines 15-16), the activation signal being capable of verifying a matching to the remote control operation (col 3 lines 21-24) (col 5 lines 18-20) (See figure 2 col 2 lines 53-55). By using the activation signal that includes a random number and only

recalled for the assignment, there is no chance of copying or imitating even with physical access to the remote unit;

receiving the activation signal by the remote control operation (col 3 lines 16-18);

preparing and transmitting a response by the remote control operation (col 3 lines 18-21);

receiving the response from the remote control operation and evaluating the response to determine if the response agrees with a predetermined setpoint response (col 3 lines 18-21); and

Pogue fails to teach determining a different activation signal, the different activation signal being determined when the response signal does not agree with a predetermined setpoint response sent by the remote control operation in response signal in the base station (see figure 2, col 4 lines 6-20);

wherein a period of time of the determining of the different activation signal is varied among successive determining step iterations.

However Pang teaches determining a different activation signal, the different activation signal being determined when the response signal does not agree with a predetermined setpoint response sent by the remote control operation in response signal in the base station (see figure 2, col 4 lines 6-20); in the base station If the check in step 106 indicates reception, at the correct time, of a "present" signal from a remote controller 30, base station 10 checks whether the signal received back from remote controller 30 via transmission link 29 matches a reference signal (step 108). If remote controller 30 confirms its presence, for example by sending back the search signal, a check is made as to whether the "present" signal that is received back

matches a reference signal stored in memory 27 (step 110), for example the search signal sent out previously (step 108). If not, base station 10 once again continues with transmission of another search signal (step 100). Pang further teaches a system **wherein a period of time of the determining of the different activation signal is varied among successive determining step iterations** (see figures 2-3, col 4 lines 1-6). Base station 10 checks whether a "present" signal has arrived from a remote controller 30 within a time period Ta that begins with emission of the search signal (step 106); time Ta is adapted to the nature of transmission links 28, 29 and the elements participating therein. If a "present" signal does not arrive within period Ta, base station 10 continues with emission of a further search signal after repetition time Ts has elapsed. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Pang with Pogue, in order to eliminates the delay in ascertaining the allocation by the fact that the base station periodically delivers search signals, when an allocated remote controller is present, initiate an allocation dialog without further user intervention.

Regarding **Claim 11,** Pogue teaches before the search signal is transmitted by the base station (base wakes up the remote, col 3 line 5-6), determining a response signal (introducing remote to base remote send a response to the base), wherein the remote control operation response in accordance with the response signal after the activation signal is received (col 3 lines 10-21, See figure 2 col 5 lines 9-23). Pogue teaches when the remote units enter the radio range of the base unit, a signal from the base unit wakes up or alerts the remote unit (col 3 lines 10-16), then remote unit ID's are transmitted from the remote units to the base unit, and stored in the base

unit.(remote units introducing to the base unit). Then base unit transmits the search signal to the remote units.

Regarding **Claim 12,** Pogue teaches a method wherein the activation signal is determined after a conclusion of a successful assignment (ID matched) of the remote control operation to the base station. If an ID signal matches the ID of the particular remote unit in its range, the remote unit response that a match has been (col 3 lines 16-21).

Regarding **Claim 14,** Pogue teaches a method according wherein: the search signal is transmitted a plurality of times, each time being immediately after another, if no contact signal is received in response to the preceding search signal (col 3 lines 26-37, col 5 lines 17-30).

Regarding **Claim 15,** Pogue teaches a method wherein: an execution time of the step of determining the other activation signal is based on carrying out security-relevant arithmetic operations, which carry out response is less that three milliseconds (col 3 lines 54-63, col 4 lines 3-40). Therefore Pogue inherently teaches the step of determining the other activation signal is lengthened in comparison to a shortest possible execution time.

Regarding **Claims 16-17,** Pogue teaches a base station comprising:

a transmitting/.receiving device for transmitting a search signal and an activation signal capable of being changed (col 3 lines 18-20, col 5 lines 15-16), and for receiving a contact signal and a response signal from remote control operations (col 3 lines 19-21, col 5 lines 11-13),

an arrangement for performing one of the causing and the evaluating of each signal received by transmitting/receiving device, wherein:

an arrangement for performing one of the causing and the evaluating determines the activation signal before a transmission of the search signal from the base station occurs (see figure 3, col 3 lines 40-52), and

the arrangement for performing one of the causing and the evaluating only calls the activation signal for an assignment (col 3 lines 10-17), and

a non-volatile memory unit for storing fixed and changeable assignment formation, the non-volatile memory unit assigning at least one of the remote control operation to the base station and making possible a test for matching (col 2 lines 56-64).

Pogue fails to teach a method **wherein the arrangement is configured to vary a period of time for determination of an activation signal during successive iterations.**

Pang further teaches a system **wherein a period of time of the determining of the different activation signal is varied among successive determining step iterations** (see figures 2-3, col 4 lines 1-6). Base station 10 checks whether a "present" signal has arrived from a remote controller 30 within a time period Ta that begins with emission of the search signal (step 106); time Ta is adapted to the nature of transmission links 28, 29 and the elements participating therein. If a "present" signal does not arrive within period Ta, base station 10 continues with emission of a further search signal after repetition time Ts has elapsed. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Pang with Pogue, in order to eliminates the delay in ascertaining the

allocation by the fact that the base station periodically delivers search signals, when an allocated remote controller is present, initiate an allocation dialog without further user intervention.

Regarding **Claim 18,** Pogue teaches a base station comprising:

a first transmitting/receiving device for transmitting a search signal and an activation signal capable of being changed (col 3 lines 18-20, col 5 lines 15-16), and for receiving a contact signal and a response signal from remote control operations (col 3 lines 19-21, col 5 lines 11-13),

a first arrangement for performing one of the causing and the evaluating of each signal received by transmitting/receiving device, wherein:

the arrangement for performing one of the causing and the evaluating determines the activation signal before a transmission of the search signal from the base station occurs (see figure 3, col 4 lines 40-52), and

the arrangement for performing one of the causing and the evaluating only calls the activation signal for an assignment (col 3 lines 10-17, col 5 lines 10-23).

a first non-volatile memory unit for storing fixed and changeable assignment formation, the non-volatile memory unit assigning at least one of the remote control operation to the base station and making possible a test for matching (col 2 lines 56-64).

a second transmitting/receiving device for receiving the search signal and an activation signal (col 3 lines 11-16), and for transmitting a contact signal and a response signal (col 3 lines 19-21, col 5 lines 11-13),

a second arrangement for performing one of an evaluating an and a transmitting of signal received (col 3 lines 15-25) , and

a second non-volatile memory unit for storing fixed and changeable assignment formation, the non-volatile memory unit assigning at least one of the remote control operation to the base station and making possible a test for matching (col 2 lines 56-66).

Pogue fails to teach a method **wherein the arrangement is configured to vary a period of time for determination of an activation signal during successive iterations**.

Pang further teaches a system **wherein a period of time of the determining of the different activation signal is varied among successive determining step iterations** (see figures 2-3, col 4 lines 1-6). Base station 10 checks whether a "present" signal has arrived from a remote controller 30 within a time period Ta that begins with emission of the search signal (step 106); time Ta is adapted to the nature of transmission links 28, 29 and the elements participating therein. If a "present" signal does not arrive within period Ta, base station 10 continues with emission of a further search signal after repetition time Ts has elapsed. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Pang with Pogue, in order to eliminates the delay in ascertaining the allocation by the fact that the base station periodically delivers search signals, when an allocated remote controller is present, initiate an allocation dialog without further user intervention.

Regarding **Claim 19,** Pogue teaches a method wherein at least an encryption keycode (col 3 lines 47-49) and a random number generated (col 4 lines 22-23) by the microprocessor function to produce the predetermined set point response signal (col 4 lines 22-39).

Regarding **Claim 20,** Pogue teaches that the search signal contains a serial number stored in a memory (col 5 lines 9-14).

Regarding **Claim 21,** Pogue teaches the base unit send out ID signals corresponding to the various remote ID's stored during initialization (column 3 lines 16-21). The ID can be a group number of remote control program.

Regarding **claim 22,** Pogue teaches herein a random number stored in a memory functions as a challenge signal (col 4 lines 19-33).

Response to Arguments

3. Applicant's arguments with respect to claims 10-22, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II. 2121 Crystal Drive, Arlington. Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Marsha Banks-Harold be reached (703)305-4379.

NM

June 2, 2004

CHARLES APPIAH
PRIMARY EXAMINER

Notice of References Cited	Application/Control No. 09/509,401	Applicant(s)/Patent Under Reexamination STEFAN SCHIMITZ	
	Examiner Naghmeh Mehrpour	Art Unit 2686	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,445,283	09-2002	Pang et al.	340/10.2
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

US006445283B1

(12) **United States Patent**
Pang et al.

(10) **Patent No.: US 6,445,283 B1**
(45) **Date of Patent: Sep. 3, 2002**

(54) **PROCESS AND DEVICE FOR ASSOCIATING A REMOTE CONTROL TO A BASE STATION**

(75) Inventors: **Peter Pang**, Mt. Waverley; **Rod Pettit**, Wantirna South; **Frank Pavatich**, Keilor Downs, all of (AU)

(73) Assignee: **Robert Bosch GmbH**, Stuttgart (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/331,037**

(22) PCT Filed: **Nov. 25, 1997**

(86) PCT No.: **PCT/DE97/02752**

§ 371 (c)(1),
(2), (4) Date: **Sep. 10, 1999**

(87) PCT Pub. No.: **WO98/27298**

PCT Pub. Date: **Jun. 25, 1998**

(30) **Foreign Application Priority Data**

Dec. 16, 1996 (DE) 196 52 227

(51) **Int. Cl.**[7] **H04Q 5/22**

(52) **U.S. Cl.** **340/10.2**; 340/10.1; 340/825.69; 340/5.1; 340/10.41; 340/5.61

(58) **Field of Search** 340/10.2, 10.1, 340/825.36, 825.49, 825.69, 825.72, 10.32, 10.33, 10.34, 5.1, 5.6, 5.61, 10.41

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,495,496	A	1/1985	Miller, III	340/825.49
4,763,121	A	8/1988	Tomoda et al.	340/825.69
5,280,267	A	1/1994	Reggiani	340/426

FOREIGN PATENT DOCUMENTS

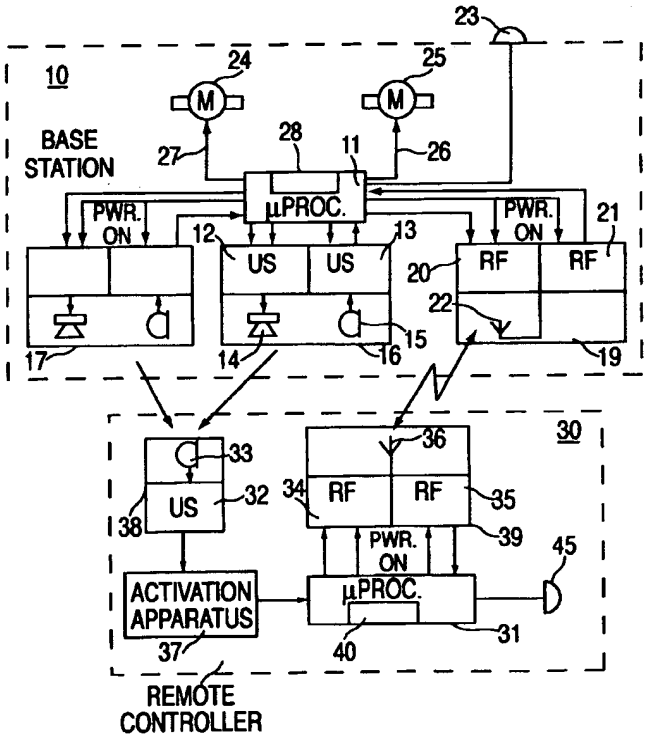
DE	43 29 697	3/1995
EP	0 285 419	10/1988
EP	0 467 036	1/1992
GB	2 259 227	3/1993

Primary Examiner—Donnie L. Crosland
(74) *Attorney, Agent, or Firm*—Kenyon & Kenyon

(57) **ABSTRACT**

Method for allocating a remote controller to a base station, having the following steps: emission of a search signal by the base station, reception of the search signal, comparison with a reference signal, and emission of a "present" signal by the actuation element if the search signal matches the reference signal. If no "present" signal arrives in response to a search signal, emission of a search signal by the base station is repeated after a repetition time has elapsed. Execution of the method is accomplished by way of a base station which has means for detecting the time Ts that has elapsed since emission of a search signal, and by way of a remote controller which switches from an idle state into an active state upon arrival of a search signal.

14 Claims, 5 Drawing Sheets



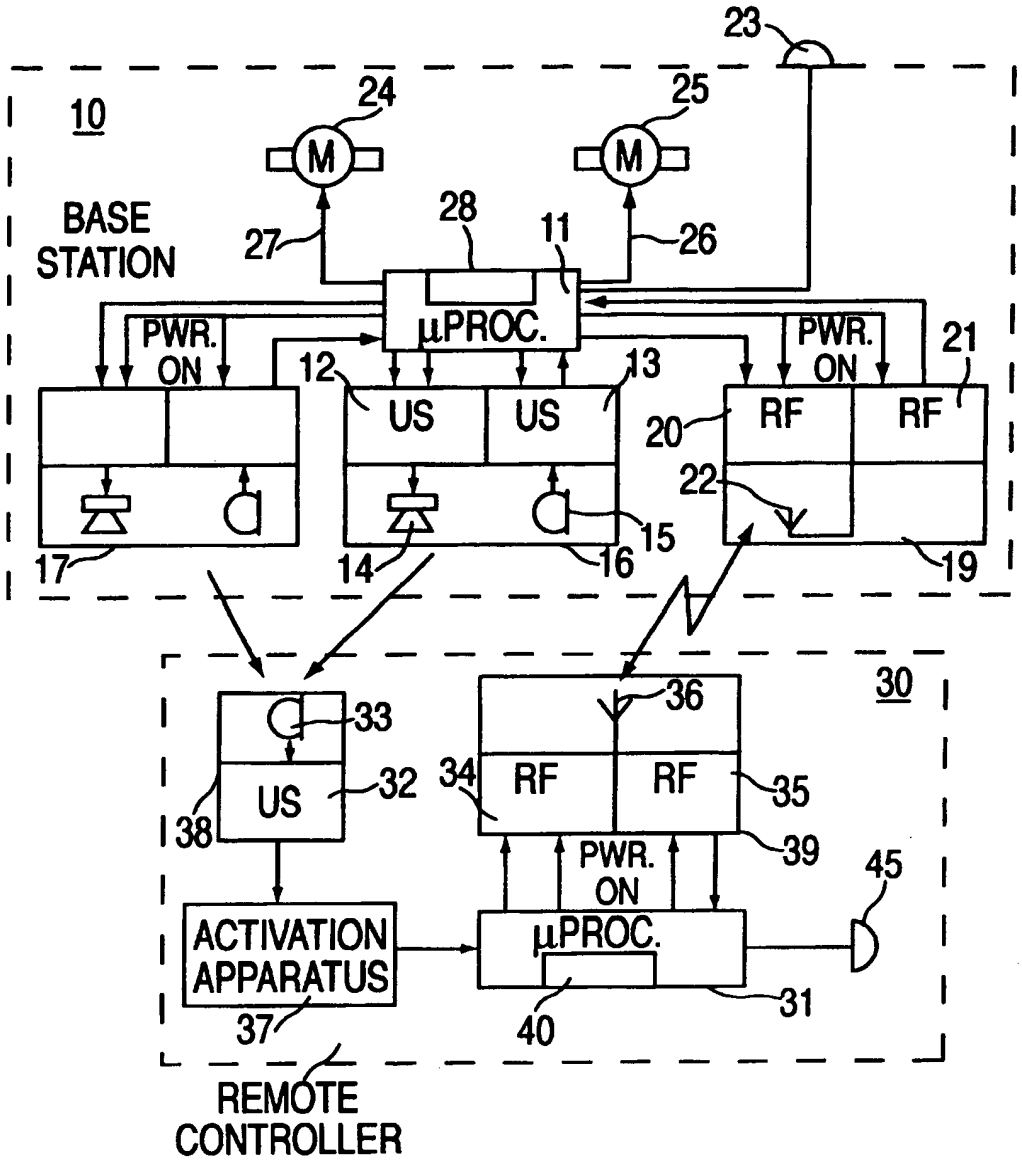

23
10
24
25
M
M
BASE STATION
27
28
11
26
µPROC.
PWR. ON
PWR. ON
21
12
13
US
US
RF
RF
20
22
15
17
14
16
19
30
33
36
US
32
34
RF
RF
35
38
39
PWR. ON
45
ACTIVATION APPARATUS
µPROC.
37
40
31
REMOTE CONTROLLER

FIG. 1

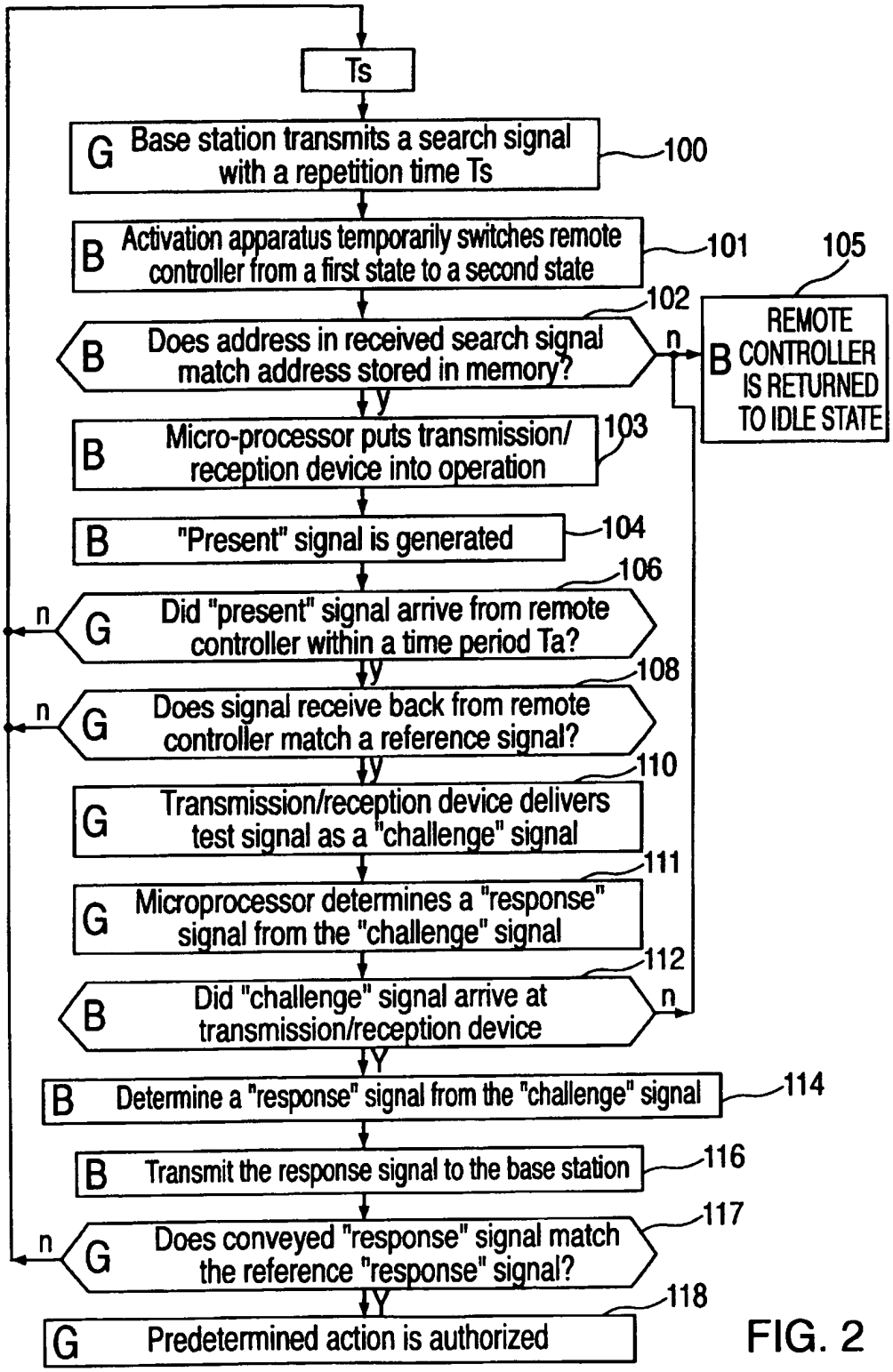

Ts
G Base station transmits a search signal with a repetition time Ts
100
B Activation apparatus temporarily switches remote controller from a first state to a second state
101
105
102
B Does address in received search signal match address stored in memory?
n
B REMOTE CONTROLLER IS RETURNED TO IDLE STATE
y
B Micro-processor puts transmission/ reception device into operation
103
B "Present" signal is generated
104
106
n G Did "present" signal arrive from remote controller within a time period Ta?
y
108
n G Does signal receive back from remote controller match a reference signal?
y
110
G Transmission/reception device delivers test signal as a "challenge" signal
111
G Microprocessor determines a "response" signal from the "challenge" signal
112
B Did "challenge" signal arrive at transmission/reception device
n
Y
B Determine a "response" signal from the "challenge" signal
114
B Transmit the response signal to the base station
116
117
n G Does conveyed "response" signal match the reference "response" signal?
Y
118
G Predetermined action is authorized

FIG. 2

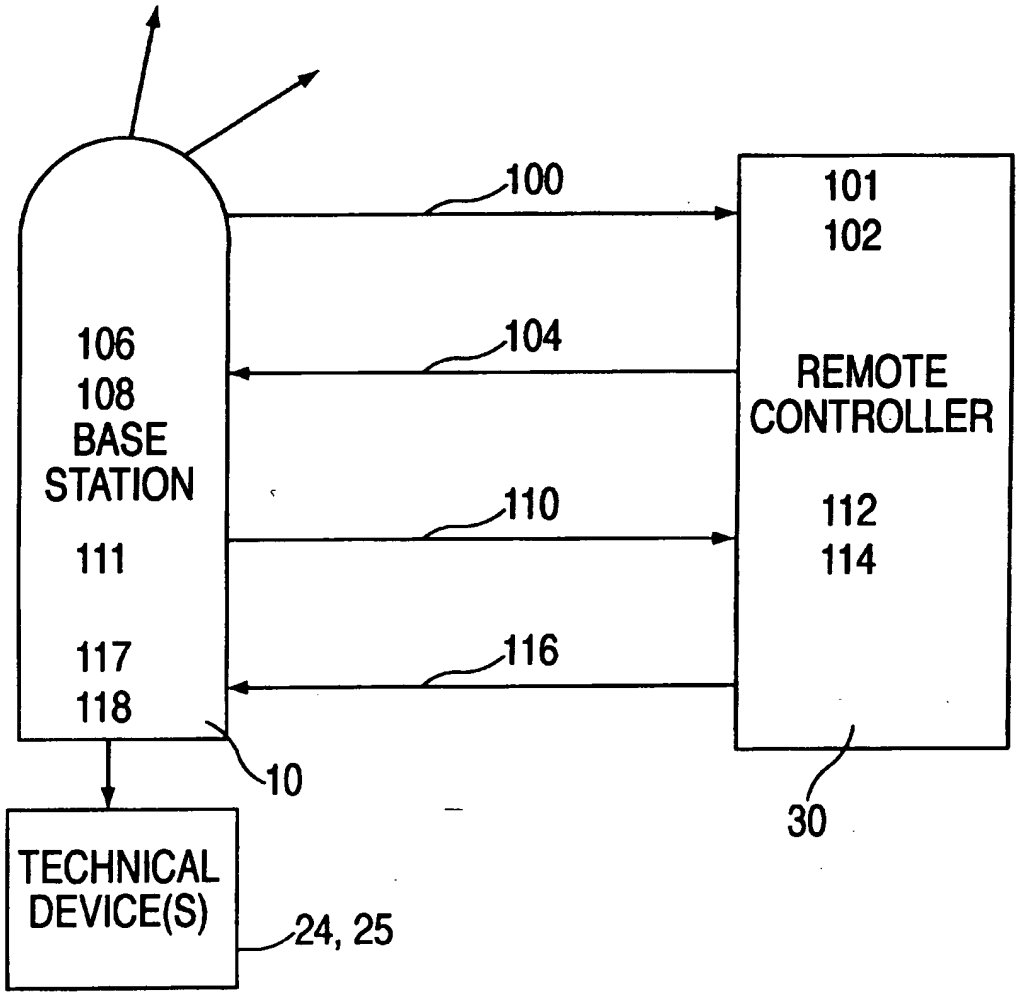

100
101
102
104
106
108
BASE
STATION
111
REMOTE
CONTROLLER
110
112
114
116
117
118
10
30
TECHNICAL
DEVICE(S)
24, 25

FIG. 3

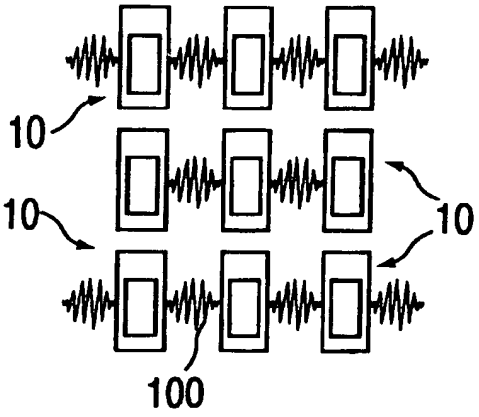


FIG. 5

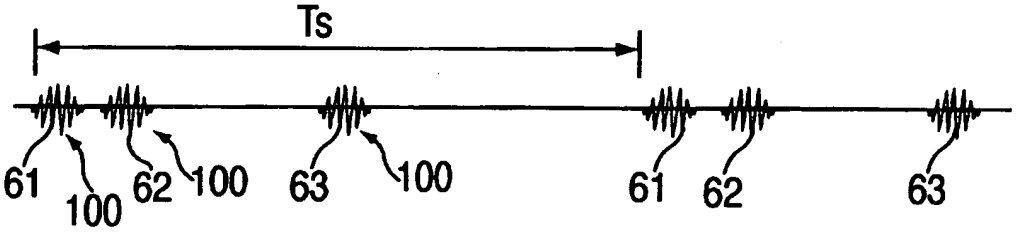


FIG. 6

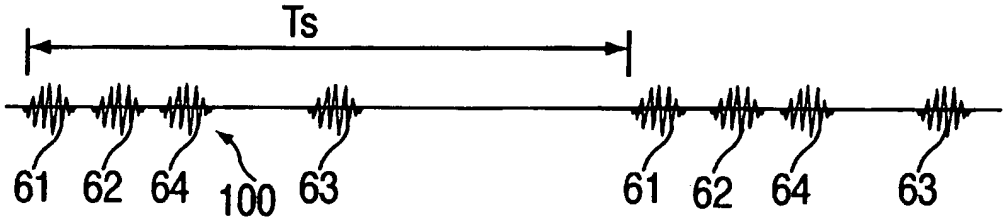


FIG. 7

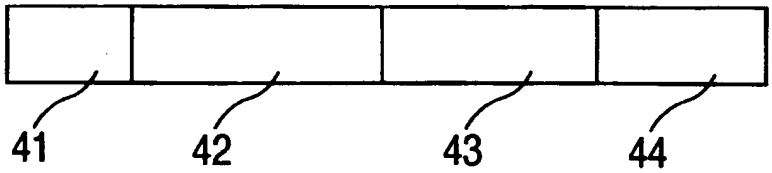


FIG. 4

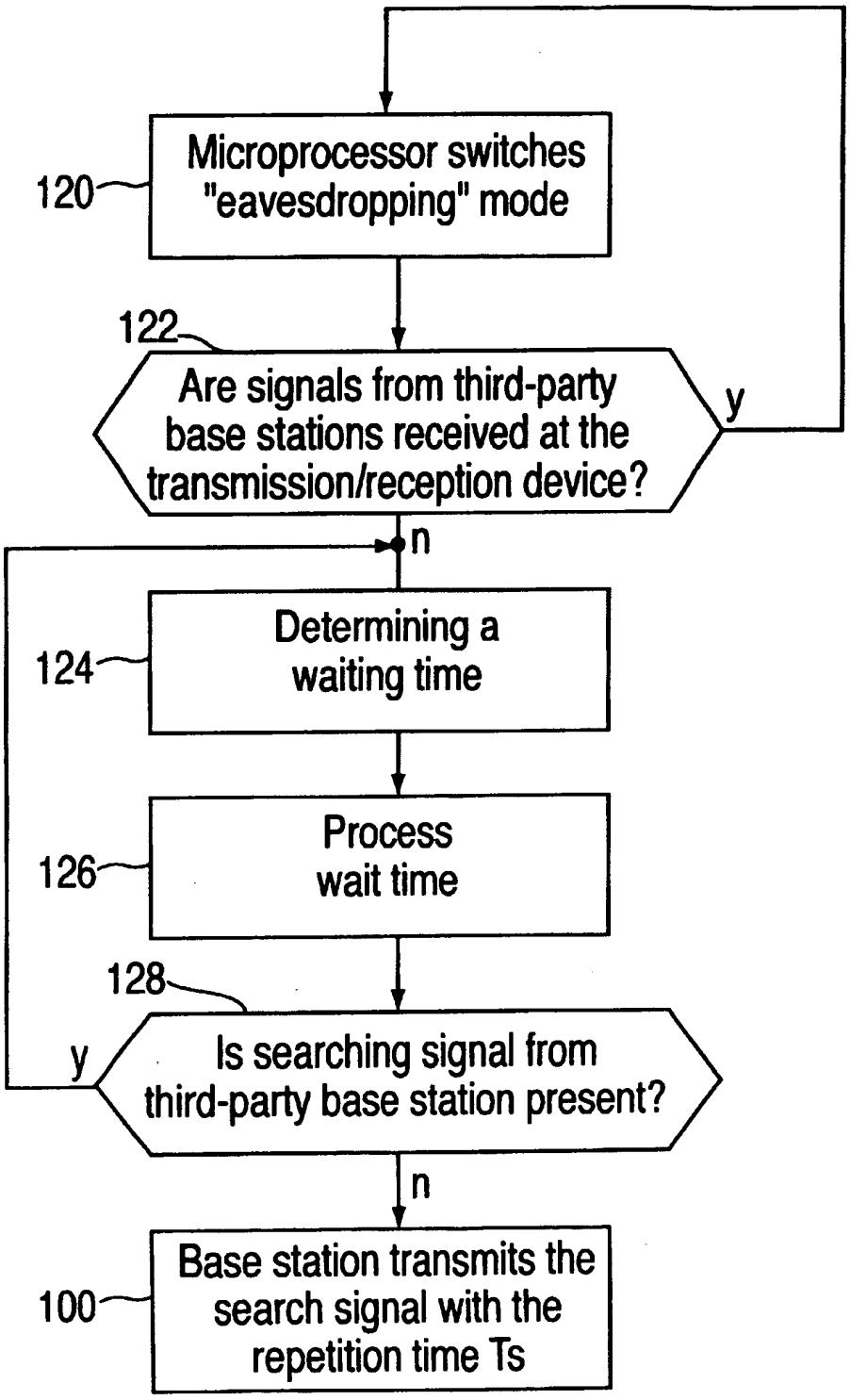

Microprocessor switches "eavesdropping" mode
120
122
Are signals from third-party base stations received at the transmission/reception device?
y
n
Determining a waiting time
124
Process wait time
126
128
Is searching signal from third-party base station present?
y
n
Base station transmits the search signal with the repetition time Ts
100

FIG. 8

PROCESS AND DEVICE FOR ASSOCIATING A REMOTE CONTROL TO A BASE STATION

BACKGROUND INFORMATION

A conventional method is described in European Patent Application No. 0 285 419 which allows a querying unit to unequivocally recognize one allocated transponder from a group of several transponders allocated to the querying unit. To do so, the querying unit progressively checks the codes of the transponders present in the access region of the querying unit. The codes are configured as multi-digit binary words. In a first query step, the querying unit checks their first digit to determine whether it matches the first digit of a reference code word present in the querying unit. All transponders which do not match at the first digit no longer participate in further testing. The remaining transponders which match at the first digit are then checked, in a second query step, as to whether the second digit of their code words agrees with the second digit of the reference code word in the querying unit. The procedure is repeated until a single transponder, whose binary coding matches all the digits of the reference code in the querying unit, is identified. For unequivocal determination of one among 2n transponders, this procedure requires n query steps. Its effect of selecting one specific qualified transponder from a plurality of transponders qualifies the known apparatus for access protection applications, in particular for situations in which sufficient time is available for performing the recognition method. In practice, however, it is often demanded that the allocation of a remote controller to a relevant base station take place in the shortest possible time, for example in the case of access systems for opening or locking doors. It is the object of the present invention to describe an allocation apparatus which permits an unequivocal allocation of an actuation element to a base station at high speed, while guaranteeing sufficient security.

SUMMARY OF THE INVENTION

The object is achieved by a method and by apparatuses configured for performing this method. The method according to the present invention advantageously eliminates any delay in ascertaining the allocation by the fact that the base station periodically delivers search signals which, when an allocated remote controller is present, initiate an allocation dialog without further user intervention. Advantageously, emission of the search signals is accomplished with little energy outlay using a corresponding energy-intensive carrier signal, while the subsequent allocation dialog, on the other hand, uses a carrier signal which guarantees secure communication. The remote controller is accordingly designed so that it is fundamentally in. an idle state which it departs from only when a search signal enters it. The method according to the present invention allows delay-free allocation even if multiple base stations are arranged in physical proximity, and if the effective ranges of their search signals overlap. In an embodiment suitable for this purpose, the base station has a device for receiving search signals from third-party base stations. Taking into account any third-party search signals being emitted, it transmits its own search signals in such a way that overlaps are prevented. Advantageously, an apparatus according to the present invention further provides a possibility for execution of an allocation test dialog to be initiated by a user.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a block diagram of an allocation apparatus.

FIG. 2 shows a flow chart to illustrate an operation of the allocation apparatus.

FIG. 3 shows an illustration of a signal flow between a base station and a remote controller.

FIG. 4 shows a structure of a search signal.

FIG. 5 shows a collision situation.

FIG. 6 shows a first distribution of the search signal over time.

FIG. 7 shows a second distribution of the search signal over time.

FIG. 8 shows a flow chart for identifying a point in time for transmitting the search signal.

DETAILED DESCRIPTION

In FIG. 1, the reference number **10** designates a base station that is part of a device or an object or is permanently allocated thereto. For example, the base station can be part of the access device of a building or a motor vehicle. Reference number **30** designates a device, hereinafter called a remote controller, which is functionally allocated in non-contact fashion to base station **10** via two signal transmission links **28, 29**. Remote controller **30** can be, for example, a transponder. Base station **10** acts via effective connections **26, 27** on the technical device of which it is a part or to which it is allocated. As indicated in FIG. **1**, these can be, for example, motors **24, 25** for actuating doors.

The core of base station **10** is constituted by a microprocessor **11** which, in particular, monitors and authorizes the output of signals by base station **10**—for example via effective connections **26, 27** to technical devices **24, 25**—and analyzes incoming signals. Microprocessor **11** has a memory **28** in which is stored, in particular, an algorithm for executing an allocation test dialog. Connected to microprocessor **11** is a transmission/reception device **16**, made up of a transmission signal generating device **12**, input signal conversion device **13**, signal radiator **14**, and signal sensor **15**, for delivering and receiving signals transmitted on a first signal carrier via transmission link **28**, which is configured as an ultrasonic link. Also connected to microprocessor **11** is a second transmission/reception device **19** for delivering and receiving signals transmitted on a second signal carrier via transmission link **29** configured as a radio link, including a transmission signal generating device **20**, an input signal conversion device **21**, and an antenna **22**. In addition, base station **10** can also contain further transmission/reception devices **17** similar in structure to transmission/reception device **16**, as depicted in FIG. **1**. This is advantageous, for example, when the apparatus is used as an access device in the doors of a multiple-door motor vehicle, each door having allocated to it its own transmission/reception device of the same type as transmission/reception devices **16, 17**. Microprocessor **11** is further connected to an actuation arrangement **23**, for example in the form of a switch or a keypad, which allows the user to manually influence the operation of microprocessor **11**.

The core of the remote controller is also a microprocessor **31**, which in particular performs the analysis of incoming signals, initiates subsequent actions based on the result, and monitors the emission of output signals. Allocated to microprocessor **31** is an activation apparatus **37**, preceding which is a reception device **38** including an ultrasonic sensing element **33** and input signal conversion device. Reception device **38** corresponds to transmission/reception devices **16, 17** on the base-station side, and with them forms first transmission link **28**. Also connected to microprocessor **31**

is a transmission/reception device **39** comprising a transmission signal generating device **34**, input signal conversion device **35**, and antenna **36**. Corresponding thereto in base station **10** is transmission/reception device **19**, with which it forms second transmission link **29**. Microprocessor **31** furthermore has a memory **40** in which, in particular, a reference signal characterizing remote controller **30**, and an algorithm for executing an allocation dialog, are stored. Microprocessor **31** is also connected to a control arrangement **45**, for example in the form of a switch or a keypad, which permits a user to manually influence the operation of microprocessor **31**. The two transmission links **28** and **29** existing between base station **10** and remote controller **30** differ in terms of the carrier signal form used in each case. The carrier signal form used for transmission link **28** is one that allows energy-saving maintenance of the transmission link and has a large effective range. Ultrasonic signals have proven suitable for these criteria. Second transmission link **29** is advantageously realized using a carrier signal that permits a reliable and interference-insensitive dialog between the participating transmission/reception devices **19**, **39**. High-frequency signals, among others, are suitable for this.

The manner of operation of the apparatus depicted in FIG. **1** will be explained below with reference to the flow chart in FIG. **2**. Preceding each of the procedural steps is a letter G or B, which indicates whether the procedural step in question takes place in base station **10** (G) or in remote controller **30** (B). In the waiting state, as long as no allocation is taking place and no remote controller is within the range of transmission link **28**, base station **10** periodically transmits a search signal with a repetition time Ts (step **100**). Repetition time Ts is selected so that no perceptible delay is apparent to a user; it is advantageously less than one second. The search signal itself advantageous extends over a duration on the order of 1/100th of a second. One possible structure of a search signal is reproduced in FIG. **4**. According to this, the search signal has a start sequence **41** in order to switch remote controllers **10** that are within range of transmission link **28** into the active state, a subsequent synchronization sequence **42** to synchronize remote controllers **30** to base station **10**, an address field with the address of a remote controller **30** allocated to base station **10** that is sending out the search signal, and an additional byte **44** optionally containing additional information that is advantageous for allocation. For example, additional byte **44** can contain an indication as to which transmission/reception device **16**, **17** it comes from.

The search signal delivered by base station **10** is received, via their reception devices **38**, by all remote controllers **30** located with range of transmission link **28**, and conveyed to activation apparatus **37**, which thereupon switches remote controller **30** temporarily from a first operating state (idle state) into a second operating state (active state) (step **101**). Microprocessor **31** now checks (step **102**) whether address **43** contained in the received search signal matches the address stored in memory **40**. If not, microprocessor **31** causes remote controller **30** to return to the idle state, in which it exhibits minimal energy consumption and merely maintains readiness to receive a new search signal by way of reception device **38** (step **105**). If the check in step **102** results in a match between the address contained in the search signal and the stored address, microprocessor **31** puts transmission/reception device **39** into operation (step **103**). It then, via transmission/reception device **39** that is now in operation, causes the emission of a "present" signal. In simple fashion, this is a signal matching the received search signal.

In the meantime, base station **10** checks whether a "present" signal has arrived from a remote controller **30** within a time period Ta that begins with emission of the search signal (step **106**); time Ta is adapted to the nature of transmission links **28**, **29** and the elements participating therein. If a "present" signal does not arrive within period Ta, base station **10** continues with emission of a further search signal after repetition time Ts has elapsed. If the check in step **106** indicates reception, at the correct time, of a "present" signal from a remote controller **30**, base station **10** checks whether the signal received back from remote controller **30** via transmission link **29** matches a reference signal (step **108**). If remote controller **30** confirms its presence, for example by sending back the search signal, a check is made as to whether the "present" signal that is received back matches a reference signal stored in memory **27** (step **110**), for example the search signal sent out previously (step **108**). If not, base station **10** once again continues with transmission of another search signal (step **100**).

If a "present" signal received back via transmission link **29** from a remote controller **30** matches the previously stored reference signal, microprocessor **11** in the base station initiates an allocation dialog on transmission link **29**. In this context, it causes transmission/reception device **19** to deliver a test signal in the form of a "challenge" signal (step **110**), i.e. a complex signal sequence suitable for checking the correctness of the allocation between base station **10** and remote controller **30**. Microprocessor **11** simultaneously determines from the "challenge" signal, with the aid of the coding algorithm stored in memory **27**, a "response" signal (step **111**) which it then in turn stores in memory **27** as the reference "response" signal. Meanwhile microprocessor **31** in the remote controller checks whether, within a time period Tb that begins with emission of the "present" signal, a "challenge" signal has arrived at transmission/reception device **39** (step **112**). Time period Tb is once again adapted to the technical nature of transmission link **29** and the elements participating therein. If a "challenge" signal has not arrived within time Tb, microprocessor **31** causes remote controller **30** to return to the idle state (step **105**). If the check in step **112** indicates that a "challenge" signal has arrived within time period Tb, microprocessor **31** ascertains from the "challenge" signal, using the algorithm stored in memory **40**, a "response" signal (step **114**) which it then transmits via transmission signal generation device **34** and antenna **36** to base station **10** (step **116**). There it is received in antenna **22**, converted by signal conversion device **21** into an electrical signal **19**, and conveyed to microprocessor **11**. The latter compares the conveyed "response" signal to the reference "response" signal stored in its memory **27** (step **117**). If this results in a non-match between "response" signal and reference "response" signal, microprocessor **11** causes base station **10** to return to the waiting state, and after time Ts has elapsed, continues with emission of another search signal (step **100**). If the check in step **117** yields a match between the reference "response" signal and the "response" signal, microprocessor **21** authorizes a predetermined action (step **118**) and, for example, actuates motor-drive locking devices which each open associated doors. The particular action initiated can also be determined by additional byte **44**, so that, for example, only that technical device **24**, **25** which is located physically closest to remote controller **30** is actuated.

FIG. **3** illustrates the signal flow occurring in the context of an allocation operation in a space-time-related depiction. The time axis extends from bottom to top, and the respective procedural steps that take place are indicated by the refer-

ence characters used in FIG. 2. The allocation process begins with transmission of a search signal by base station **10** (step **100**), followed by checking of the received search signal in remote controller **30** (steps **101**, **102**) and emission of a "present" signal (step **104**) in the opposite direction. After this has been checked (steps **106**, **108**), base station **10** replies by sending out a "challenge" signal (step **110**) which is then checked in turn in remote controller **30** and results in a "response" signal being sent back (step **115**). If the latter, after checking by base station **10**, matches the reference "response" signal ascertained previously (step **111**), the action affecting technical devices **24**, **25** is performed (step **118**).

If, as indicated in FIG. **5**, several base stations **10** are arranged in immediate physical proximity, it is possible, if no corrective actions have been taken, for the effective ranges of the search signals emitted by the individual base stations **10** to overlap; the consequence is that the search signals transmitted via transmission link **28** are no longer recognized as such by remote controllers **30**. Remote controllers **30** consequently do not switch from the idle state to the active state. In order to guarantee rapid allocation even in a case such as this, base stations **10** each have a reception device, comprising an antenna **15** and signal conversion device **13**, for receiving search signals from adjacent base stations. Search signals received therewith are recorded by microprocessor **11**. For example, the situation reproduced in FIG. **6** might occur. In this case three search signals **61** through **63** from third-party base stations have arrived at transmission/reception device **14** in succession, at non-identical intervals. From the periodicity of the overall group, microprocessor **11** ascertains repetition time Ts. This contains, as is evident from FIG. **6**, segments in which no search signal occurs. Microprocessor **31** now places its own search signal **64** into one such segment, as depicted in FIG. **7**. Identification of the temporal position of third-party search signals, and determination of a suitable point in time for transmission of an own search signal, are advantageously accomplished in a separate "eavesdropping" mode which base station **10** assumes for a limited time in each case before transitioning into the waiting state.

Another possibility for preventing the overlap of search signals from base stations **10** arranged in physical proximity to one another will be explained below with reference to FIG. **8**. Once again microprocessor **11**, before transitioning into the waiting state with subsequent emission of search signals, switches first into an "eavesdropping" mode (step **120**) in which it checks whether search signals from third-party base stations **10** are being received at transmission/reception device **16**, **17**. If so, it remains in "eavesdropping" mode and repeats the query (step **122**). If it ascertains, in the check in step **122**, that a search signal of an third-party base station is not present, it determines—based on a pseudorandom number which is a function of address **43** contained in the search signal and can be defined using the equation: pseudorandom number=k*[(s*b+1) modulo m], where s=search signal address, m=a constant corresponding to the maximum possible number of search signals within repetition time Ts, b=a randomness-maximizing constant (e.g. b=0.125), and k=scaling factor, and taking into account the typical repetition time Ts—a waiting time (step **124**) which it then processes (step **126**). Once the waiting time has elapsed, it checks again (step **128**) as to whether a search signal from a third-party base station is present. If this check indicates that after processing of the waiting time, a search signal of a third-party base station is not present, microprocessor **31** causes transmission of its own search signal via transmission link **28**.

To ensure that communication is established between base station **10** and remote controller **30** even in an environment affected by strong interference signals, base station **10** is advantageously designed to perform both of the anti-collision methods described above. It switches respectively from one to the other if communication has not been established after performing a predefined, fixed number of attempts using one method. Provision can also be made, in the case of strong ambient signals, for varying the search signal transmission output and increasing the reception sensitivity of remote controller **30**.

To further improve the usability of the apparatus being proposed, it is advantageous to provide a possibility for execution of an allocation test dialog to be initiated manually by a user, rather than having remote controller **30** react automatically to a search signal transmitted by a base station. Remote controller **30** has, for this purpose, suitable control means **45**, e.g. in the form of one or more switches, by way of which activation of microprocessor **31**, and of transmission/reception device **39** downstream from it, into the active state can be initiated directly. In this case, microprocessor **31** causes transmission of a "present" signal whose additional byte **44** contains a datum indicating manual startup. This is recognized in base station **10** by microprocessor **11**, which thereupon immediately causes transmission of a "challenge" signal (step **110**), and implementation of the further steps indicated in FIG. **2**.

Base station **10** advantageously also has a suitable control arrangement **23**, for example in the form of a switch actuated by the door handle, with which an abbreviated manual allocation action is possible. Once a manual allocation action has been initiated thereby via base station **10**, the latter transmits to remote controller **30** a search signal whose additional byte contains a datum indicating manual actuation. This is recognized by microprocessor **31** in the remote controller, which thereupon immediately performs step **112** and awaits the arrival of a "challenge" signal from base station **10**.

Additional embodiments, in particular of the proposed apparatuses, can also be provided while retaining the underlying idea of performing a rapid, unequivocal allocation of a remote controller to a base station by switching the remote controller into an active state only upon the arrival of a search signal but fundamentally remaining in an energy-saving idle state, and then performing an allocation check. This applies, for example, to the configuration of base stations **10** and remote controllers **30**, or to the configuration of the search signal that is used. It is moreover also possible, in particular, to use different carrier signal forms, for example to use microwaves for the search signal.

What is claimed is:

1. A base station, comprising:

at least one transmission device emitting a first search signal and a second search signal, the second search signal being emitted immediately after the first search signal;

a reception device receiving a particular signal from a remote controller;

a first arrangement determining if the particular signal has arrived at the base station; and

a second arrangement determining a time period which has elapsed starting from a time when the at least one transmission device emits the second search signal,

wherein the at least one transmission device repeats the emission after the time period elapses if the particular signal has not arrived at the base station in response to a receipt of the first search signal.

2. The base station according to claim 1, wherein, after the predetermined signal arrives at the base station, the base station initiates an allocation dialog with the remote controller by transmitting a test signal to the remote controller.

3. The base station according to claim 1, wherein the second search signal includes an address of the remote controller.

4. The base station according to claim 1, wherein the at least one transmission device includes a plurality of transmission devices emitting a plurality of further search signals, and wherein the further search signals include a datum identifying a transmitter from which the further search signals are derived.

5. The base station according to claim 1, wherein the reception device receives the first and second search signals.

6. The base station according to claim 1, further comprising:

a third arrangement determining a further repetition time period of third-party search signals generated by third-party base stations.

7. The base station according to claim 1, wherein, only if further search signals are not being transmitted by further base stations simultaneously with the second search signal, the at least one transmission device emits the second search signal.

8. The base station according to claim 1, wherein, if further search signals generated by third-party base stations arrive at the base station simultaneously with the second search signal, the base station delays the at least one transmission device from emitting the second search signal.

9. The base station according to claim 1,

wherein, if a further search signal generated by a third-party base station is simultaneously present with the second search signal emitted by the at least one transmission device, the base station determines a waiting time period in a randomly controlled manner, and

wherein the at least one transmission device transmits the second search signal after the waiting time period.

10. An apparatus for allocating a remote controller to a base station, comprising:

a transmission device emitting first and second search signals and being arranged in the base station, the second search signal being transmitted immediately following the first search signal; and

a processing device being arranged in the remote controller, the processing device including an arrangement which:

receives further search signals, and

transmits a particular signal if the second search signal matches a reference signal,

wherein, if the particular signal has not arrived in response to a receipt of the first search signal, the transmission device emits another search signal after a predetermined repetition time period.

11. The apparatus according to claim 10, wherein the base station and the remote controller establish an allocation dialog therebetween, and wherein the second search signal and the allocation dialog are capable of utilizing predetermined carrier signal forms.

12. The apparatus according to claim 10, wherein the base station and the remote controller establish an allocation dialog therebetween, and wherein the allocation dialog uses high-frequency signals.

13. The apparatus according to claim 10, wherein the second search signal is an ultrasonic signal.

14. A method for allocating a remote controller to a base station, comprising the steps of:

(a) emitting a first search signal by the base station;

(b) emitting a second search signal by the base station, the second search signal being emitted immediately after the first search signal;

(c) receiving the second search signal by the remote controller;

(d) in the remote controller, comparing the second search signal to a reference signal;

(e) emitting a particular signal by the remote controller if the second search signal matches the reference signal;

(f) if the particular signal has not arrived at the base station in response to a reception of the first search signal, repeating step (a) after a predetermined repetition time period.

* * * * *

USPTO TO PROVIDE ELECTRONIC ACCESS TO CITED U.S. PATENT REFERENCES WITH OFFICE ACTIONS AND CEASE SUPPLYING PAPER COPIES

In support of its 21st Century Strategic Plan goal of increased patent e-Government, beginning in June 2004, the United States Patent and Trademark Office (Office or USPTO) will begin the phase-in of its E-Patent Reference program and hence will: (1) **provide downloading capability of the U.S. patents and U.S. patent application publications cited in Office actions** via the E-Patent Reference feature of the Office's Patent Application Information Retrieval (PAIR) system; and (2) **cease mailing paper copies of U.S. patents and U.S. patent application publications with Office actions** (in applications and during reexamination proceedings) except for citations made during the international stage of an international application under the Patent Cooperation Treaty (PCT). In order to use the new E-Patent Reference feature applicants must: (1) obtain a digital certificate and software from the Office; (2) obtain a customer number from the Office; and (3) properly associate patent applications with the customer number. Alternatively, copies of all U.S. patents and patent application publications can be accessed without a digital certificate from the USPTO web site, from the USPTO Office of Public Records, and from commercial sources. The Office will continue the practice of supplying paper copies of foreign patent documents and non-patent literature with Office actions. Paper copies of cited references will continue to be provided by the USPTO for international applications during the international stage.

Schedule

June 2004	TCs 1600, 1700, 2800 and 2900
July 2004	TCs 3600 and 3700
August 2004	TCs 2100 and 2600

All U.S. patents and U.S. patent application publications are available on the USPTO web site. However, a simple system for downloading the cited U.S. patents and patent application publications has been established for applicants, called the E-Patent Reference system. As E-Patent Reference and Private PAIR require participating applicants to have a customer number, retrieval software and a digital certificate, all applicants are strongly encouraged to contact the Patent Electronic Business Center to acquire these items. To be ready to use this system by June 1, 2004, contact the Patent EBC as soon as possible by phone at 866-217-9197 (toll-free), 703-305-3028 or 703-308-6845 or electronically via the Internet at ebc@uspto.gov.

Other Options

The E-Patent Reference function requires the applicant to use the secure Private PAIR system, which establishes confidential communications with the applicant. Applicants using this facility must receive a digital certificate, as described above. Other options for obtaining patents which do not require the digital certificate include the USPTO's free Patents on the Web program (http://www.uspto.gov/patft/index.html). The USPTO's Office of Public Records also supplies copies of patents for a fee (http://ebiz1.uspto.gov/oems25p/index.html). Commercial sources also provide U.S. patents and patent application publications.

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Summary

The United States Patent and Trademark Office (Office or USPTO) plans in the near future to: (1) cease mailing copies of U.S. patents and U.S. patent application publications (US patent references) with Office actions except for citations made during the international stage of an international application under the Patent Cooperation Treaty and those made during reexamination proceedings; and (2) provide electronic access to, with convenient downloading capability of, the US patent references cited in an Office action via the Office's private Patent Application Information Retrieval (PAIR) system which has a new feature called "E-Patent Reference." Before ceasing to provide copies of U.S. patent references with Office actions, the Office shall test the feasibility of the E-Patent Reference feature by conducting a two-month pilot project starting with Office actions mailed after December 1, 2003. The Office shall evaluate the pilot project and publish the results in a notice which will be posted on the Office's web site (www.USPTO.gov) and in the Patent Official Gazette (O.G.). In order to use the new E-Patent Reference feature during the pilot period, or when the Office ceases to send copies of U.S. patent references with Office actions, the applicant must: (1) obtain a digital certificate from the Office; (2) obtain a customer number from the Office, and (3) properly associate applications with the customer number. The pilot project does not involve or affect the current Office practice of supplying paper copies of foreign patent documents and non-patent literature with Office actions. Paper copies of references will continue to be provided by the USPTO for searches and written opinions prepared by the USPTO for international applications during the international stage and for reexamination proceedings.

Description of Pilot Project to Provide Electronic Access to Cited U.S. Patent References

On December 1, 2003, the Office will make available a new feature, E-Patent Reference, in the Office's private PAIR system, to allow more convenient downloading of U.S. patents and U.S. patent application publications. The new feature will allow an authorized user of private PAIR to download some or all of the U.S. patents and U.S. patent application publications cited by an examiner on form PTO-892 in Office actions, as well as U.S. patents and U.S. patent application publications submitted by applicants on form PTO/SB08 (1449) as part of an IDS. The retrieval of some or all of the documents may be performed in one downloading step with the documents encoded as Adobe Portable Document format (.pdf) files, which is an improvement over the current page-by-page retrieval capability from other USPTO systems.

Steps to Use the New E-Patent Reference Feature During the Pilot Project and Thereafter

Access to private PAIR is required to utilize E-Patent Reference. If you don't already have access to private PAIR, the Office urges practitioners, and applicants not represented by a practitioner, to take advantage of the transition period to obtain a no-cost USPTO Public Key Infrastructure (PKI) digital certificate, obtain a USPTO customer number, associate all of their pending and new application filings with their customer number, install no-cost software (supplied by the Office) required to access private PAIR and E-Patent Reference feature, and make appropriate arrangements for Internet access. The full instructions for obtaining a PKI digital certificate are available at the Office's Electronic Business Center (EBC) web page at: <http://www.uspto.gov/ebc/downloads.html>. Note that a notarized signature will be required to obtain a digital certificate.

To get a Customer Number, download and complete the Customer Number Request form, PTO-SB125, at: http://www.uspto.gov/web/forms/sb0125.pdf. The completed form can then be transmitted by facsimile to the Electronic Business Center at (703) 308-2840, or mailed to the address on the form. If you are a registered attorney or patent agent, then your registration number must be associated with your customer number. This is accomplished by adding your registration number to the Customer Number Request form. A description of associating a customer number with an application is described at the EBC web page at: http://www.uspto.gov/ebc/registration_pair.html.

The E-Patent Reference feature will be accessed using a new button on the private PAIR screen. Ordinarily all of the cited U.S. patent and U.S. patent application publication references will be available over the Internet using the Office's new E-Patent Reference feature. The size of the references to be downloaded will be displayed by E-Patent Reference so the download time can be estimated. Applicants and registered practitioners can select to download all of the references or any combination of cited references. Selected references will be downloaded as complete documents as Adobe Portable Document Format (.pdf) files. For a limited period of time, the USPTO will include a copy of this notice with Office actions to encourage applicants to use this new feature and, if needed, to take the steps outlined above in order to be able to utilize this new feature during the pilot and thereafter.

During the two-month pilot, the Office will evaluate the stability and capacity of the E-Patent Reference feature to reliably provide electronic access to cited U.S. patent and U.S. patent application publication references. While copies of U.S. patent and U.S. patent application publication references cited by examiners will continue to be mailed with Office actions during the pilot project, applicants are encouraged to use the private PAIR and the E-Patent Reference feature to electronically access and download cited U.S. patent and U.S. patent application publication references so the Office will be able to objectively evaluate its performance. The public is encouraged to submit comments to the Office on the usability and performance of the E-Patent Reference feature during the pilot. Further, during the pilot period registered practitioners, and applicants not represented by a practitioner, are encouraged to experiment with the feature, develop a proficiency in using the feature, and establish new internal processes for using the new access to the cited U.S. patents and U.S. patent application publications to prepare for the anti[redacted] cessation of the current Office practice of supplying copies of such cited

references. The Office plans to continue to provide access to the E-Patent Reference feature during its evaluation of the pilot.

Comments

Comments concerning the E-Patent Reference feature should be in writing and directed to the Electronic Business Center (EBC) at the USPTO by electronic mail at eReference@uspto.gov or by facsimile to (703) 308-2840. Comments will be posted and made available for public inspection. To ensure that comments are considered in the evaluation of the pilot project, comments should be submitted in writing by January 15, 2004.

Comments with respect to specific applications should be sent to the Technology Centers' customer service centers. Comments concerning digital certificates, customer numbers, and associating customer numbers with applications should be sent to the Electronic Business Center (EBC) at the USPTO by facsimile at (703) 308-2840 or by e-mail at EBC@uspto.gov.

Implementation after Pilot

After the pilot, its evaluation, and publication of a subsequent notice as indicated above, the Office expects to implement its plan to cease mailing paper copies of U.S. patent references cited during examination of non provisional applications on or after February 2, 2004; although copies of cited foreign patent documents, as well as non-patent literature, will still be mailed to the applicant until such time as substantially all applications have been scanned into IFW.

For Further Information Contact

Technical information on the operation of the IFW system can be found on the USPTO website at http://www.uspto.gov/web/patents/ifw/index.html. Comments concerning the E-Patent Reference feature and questions concerning the operation of the PAIR system should be directed to the EBC at the USPTO at (866) 217-9197. The EBC may also be contacted by facsimile at (703) 308-2840 or by e-mail at EBC@uspto.gov.

Date. 12/1/03

Nicholas P. Godici

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